

**Work Order ID 71011**

Tuesday, June 21, 2011 8:10:59 AM



Page 1

Item ID: D117-762-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 6/21/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/30/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

Draw Nbr

Revision Nbr

D3492

C

D3582

Rev A

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile &amp; type labels per PPP D117-762-041 CHG001

N/A

120

0.00



BENDING MACHINE - SKIDTUBES

CNC Bend 1

Memo

0.00

CNC Delta 100 Bender

Bend tube as per program D3582 on CNC Bender and Dwg D3582. Folio 3,  
use bending aid DT9632  
2- cut fwd end of tube as per dwg

i v BE1/07/11

**Work Order ID 71011**

Page 2

Tuesday, June 21, 2011 8:10:59 AM

Item ID: D117-762-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 6/21/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/30/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

130

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Cut Aft end using DT8185

2-Deburr ends

3-Drill Aft Cap holes using DT8678 \*\*\*DO NOT OPEN AFT CAP HOLE\*\*\*

4-Locate DT 8973 &amp; Drill Ground wire hole on top of Tube.

5-Install 3/16 cleco in Ground wire hole ,then drill all X-Bolt holes using 3/16" drill.

6-Drill pilot holes for wearplates using DT8900

7-Open wearplate holes to Ø19/64" (0.297") as per Dwg D3582.

8- open ground wear holes to 0.391" as per section B-B

9-Open Aft Cap holes using .209" drill.

10-Drill pilot holes for section D-D and E-E. Holes must be laid out by hand. Mark out Center line and make sure that 6.65 and 5.906 measurements are respected. Double check before drilling, do not open holes to finish size.

Dh 11/07/11

3 BE 11/07/11

**Work Order ID 71011**

Tuesday, June 21, 2011 8:10:59 AM



Page 3

Item ID: D117-762-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 6/21/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/30/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

140

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Weld fwd cap D2964 per dwg D3582 and QSI 004

A/R AL ROD

Batch:

2-Grind flush

M112860/M115778

BB 11/07/12

150

0.00



QC10- Inspect visual per QSI004- ground welds

QC

Memo

0.00

Quality Control

160

0.00



QC5- Inspect part completeness to step on W/O

QC

Memo

0.00

Quality Control

**Work Order ID 71011**

Page 4

Tuesday, June 21, 2011 8:10:59 AM

Item ID: D117-762-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 6/21/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/30/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

170

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

①

B11/07/12

180

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

1 0 B11/07/12

**Work Order ID 71011**

Tuesday, June 21, 2011 8:10:59 AM



Page 5

Item ID: D117-762-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 6/21/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/30/2011 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

190

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Open X-Bolt holes to finish size as per Dwg D3582, all sections

2-Counter Sink X-BOLT holes as per Dwg D3582

3-Deburr and blow out chips from inside of tube, prep. tube for welding.

4-Bond web as per Dwg D3582 &amp; QSI015

A/R 241 Sike Flex Batch: 116945  
Exp Date: 12/01/15

5-Weld x-bolt spacers(D2973) as per Dwg D3582 section B-B.

A/R AL ROD Batch: M1128860

6-Grind welds flush

BB 11/07/12

B 11/07/12

BE 11/07/13

BB 11/07/13

200

0.00



QC10- Inspect visual per QSI004- ground welds

QC

Memo

0.00

Quality Control

S 11/07/14

(4)

**Work Order ID 71011**

Page 6

Tuesday, June 21, 2011 8:10:59 AM

Item ID: D117-762-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 6/21/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/30/2011 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

210

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

8/10/14



215

Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

Hand Finishing

1 0 11/10/14

220

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

0.00

Powder Coating

M 11-7-15.  
START TIME 12:35  
OVEN TEMPERATURE: 320°  
FINISH TIME: 1:05.

1 11-7-14.

**Work Order ID 71011**

Tuesday, June 21, 2011 8:10:59 AM



Page 7

Item ID: D117-762-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 6/21/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/30/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230	QC3- Inspect Part Finish	0.00							
QC	Memo	0.00				1	0	20	6/21/11
Quality Control									
240	HandFinishing	0.00							
HandFinish	Memo	0.00				1	0	20	6/21/11
Hand Finishing	Install Wearplate & Ground Wire inserts as per Dwg D3582.								

# Work Order ID 71011

Tuesday, June 21, 2011 8:10:59 AM



Page 8

Item ID: D117-762-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 6/21/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/30/2011 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

250

0.00



HandFinishing

HandFinish

Memo

0.00

Hand Finishing

☒ Inspect for Foreign objects

☒ 2-Install Aft cap as per Dwg D3582, Detail "C"

A/R 241 Sika Flex Batch: 1117516  
Exp Date: 12/01

☒ 3-Install Wearplates as per Dwg D3582,

Note: Install Bolt and washer on Ground Wire inserts on top of tube see section D-D of dwg D3582

\*\*\*\*\*Do not install bolts where indicated on Dwg(Note #6)\*\*\*\*\*

☒ A/R 241 Sika Flex Batch: 1117516  
Exp Date: 12/01

☒ 4-assemble o'ring as per dwg D3492 and apply o'ring lube

A/R 55-o'ring lube batch: 1104189

☒ 5- Wing Walk as per Dwg D3582 and QSI 005 4.4

1117863

260

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

8/10/11





**Work Order ID 71011**

Page 9

Tuesday, June 21, 2011 8:10:59 AM

Item ID: D117-762-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 6/21/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/30/2011 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
270		0.00							
	Packaging								
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D117-762-041								
	Location: _____								
	PPP Rev: <u>PP71023</u>								
280		0.00							
	QC21- Final Inspection - Work Order Release								
QC	Memo	0.00							
Quality Control									

447/290

11/7/19

MF  
11-07-19

Tuesday, June 21, 2011 8:10:54 AM

**Required Qty: 1.00**

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

## Plug

 $xz$ 

6

## Plug

1371211

27

## Plug

45

46694

45

### 3.540 Outer Tube, Extrut

HALL

82

28672

9

59934

73

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, June 21, 2011 8:10:55 AM

Work Order ID: 71011

Parent Item: D117-762-041

Parent Item Name: Replacement Skidtube

Start Date: 6/21/2011

Required Date: 6/30/2011

Start Qty: 1.00

Required Qty: 1.00

D2964 Manufactured No 140 Each 22.0000 1 1  
Cap

Location	Loc Qty	Loc Code
LG002	22	
14101	8	
64654	14	

D2971 Manufactured No 190 Each 17.0000 1 1  
Cross Bolt Spacer

Location	Loc Qty	Loc Code
LG001	17	
44445	17	

D3584-1 Manufactured No 190 Each 0.0000 1 1  
Web

D2973 Manufactured No 190 Each 139.0000 2 2  
Cross Bolt Spacer

Location	Loc Qty	Loc Code
LG002	139	
14636	139	

D3662-3 Manufactured No 190 Each 17.0000 1 1  
Crossbolt Spacer

Location	Loc Qty	Loc Code
LG001	17	
44456	17	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, June 21, 2011 8:10:56 AM

Work Order ID: 71011

Parent Item: D117-762-041

Parent Item Name: Replacement Skidtube

Start Date: 6/21/2011

Required Date: 6/30/2011

Start Qty: 1.00

Required Qty: 1.00

D3662-1 Manufactured No

190 Each

7.0000

3

3



Crossbolt Spacer

Location

Loc Qty

Loc Code

LG001

7

64451

7

ALS4-1032-130

Purchased

No

240

Each

1,478.000

36

36



Insert

Location

Loc Qty

Loc Code

ST281

8

117331

8

ST282

1470

117717

1470

ALS4-428-165

Purchased

No

240

Each

529.0000

2

2



Inserts

Location

Loc Qty

Loc Code

FP

486

117769

486

FP-B

43

114172

43

D2965

Manufactured

No

250

Each

28.0000

1

1



Cap, 105 Skidtube

Location

Loc Qty

Loc Code

FP006

28

52057

28

8/21/07/13  
B 71799 13

ul 11/07/14

x36

ul 11/07/15

x2

ul 11/07/15

u/

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, June 21, 2011 8:10:56 AM

Work Order ID: 71011

Parent Item: D117-762-041



Parent Item Name: Replacement Skidtube

Start Date: 6/21/2011



Required Date: 6/30/2011

Start Qty: 1.00



Required Qty: 1.00

D3508-3	Manufactured	No	250	Each	6.0000	1	1
							<u>24 110715</u>
Wearplate							



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP021	6	1371210
38527	1	
67489	5	

D3508-9	Manufactured	No	250	Each	10.0000	1	1
							<u>24 110715</u>
Wearplate							



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP021	10	
70307	10	

D3558-3	Manufactured	No	250	Each	9.0000	1	1
							<u>24 110715</u>
Gasket							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP014	9	
67486	9	

D3558-9	Manufactured	No	250	Each	6.0000	1	1
							<u>24 110715</u>
Gasket							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP014	6	
55469	6	

D3558-11	Manufactured	No	250	Each	11.0000	1	1
							<u>24 110715</u>
Gasket							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP014	11	
70312	11	



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, June 21, 2011 8:10:56 AM

Work Order ID: 71011

Parent Item: D117-762-041



Parent Item Name: Replacement Skidtube

Start Date: 6/21/2011

Required Date: 6/30/2011



Start Qty: 1.00

Required Qty: 1.00

D3558-13	Manufactured	No	250	Each	25.0000	1	1
							<u>24 6/10/15</u>
Gasket							



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP014	25	
<u>59558</u>	25	<u>41</u>

D3508-11	Manufactured	No	250	Each	9.0000	1	1
							<u>24 6/10/15</u>
Wearplate							



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP016	9	
<u>69941</u>	9	<u>41</u>

D3508-13	Manufactured	No	250	Each	3.0000	1	1
							<u>24 6/10/15</u>
Wearplate							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP016	3	<u>1371027</u>
<u>65191</u>	3	<u>41</u>

AN960JD10L	NAS1149D0332J	Purchased	No	250	Each	0.0000	2	2
							<u>(v2) 24 6/10/15</u>	
Washer								

12117087

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, June 21, 2011 8:10:56 AM

Work Order ID: 71011

Parent Item: D117-762-041



Parent Item Name: Replacement Skidtube

Start Date: 6/21/2011



Required Date: 6/30/2011

Start Qty: 1.00



Required Qty: 1.00

AN3C4A Purchased No 250 Each 2,183.000 28 28  
  
 BOLT  28 110715

Location	Loc Qty	Loc Code
ST350	2183	
117094	181	
117313	2	
117688	800	
117795	500	28
117872	200	
118012	500	

AN3C5A Purchased No 250 Each 1,413.000 2 2  
  
 Bolt  2 110715

Location	Loc Qty	Loc Code
FP-A	7	
115835	7	
ST350	1406	
116419	28	
116549	54	
117343	500	
117508	24	
117764	300	
117872	500	28

AN960JD416L NAS1149D0416J Purchased No 250 Each 29.0000 2 2  
  
 Washer  2 110715

Location	Loc Qty	Loc Code
FP-B	29	
110153	29	1116513

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, June 21, 2011 8:10:56 AM

Work Order ID: 71011

Parent Item: D117-762-041

Parent Item Name: Replacement Skidtube

Start Date: 6/21/2011

Required Date: 6/30/2011

Start Qty: 1.00

Required Qty: 1.00

AN960C10L NAS1149C0332 Purchased No

250 Each 0.0000 28 28



washer

AN4-4A Purchased No

250 Each 96.0000 2 2



Bolt

Location

Loc Qty

Loc Code

FP-B

44

114615

44

ST356

52

114615

52

NAS1611-012 Purchased No

250 Each 50.0000 6 6



O-RING

Location

Loc Qty

Loc Code

FP-A

50

113845

50

NAS1611-015 Purchased No

250 Each 85.0000 2 2



O-RING

Location

Loc Qty

Loc Code

FP-A

85

115101

85

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Page 8

Tuesday, June 21, 2011 8:10:56 AM

Work Order ID: 71011



Parent Item: D117-762-041



Parent Item Name: Replacement Skidtube

Start Date: 6/21/2011

Required Date: 6/30/2011

Start Qty: 1.00

Required Qty: 1.00

NAS1611-016

Purchased

No

250

Each

103.0000

2

2



*Handwritten: 2 6/21/11*

O-RING

Location

Loc Qty

Loc Code

FP-A

103

107178

1

112492

58

113524

44

*Handwritten: XZ*

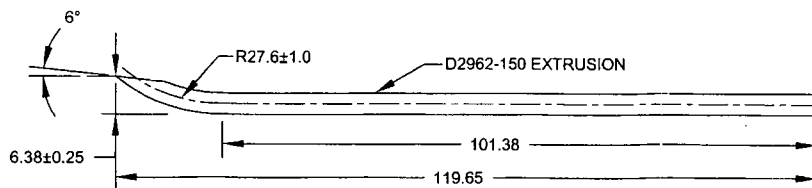


# PARTS LIST FOR D3582-041 SKIDTUBE ASSEMBLY

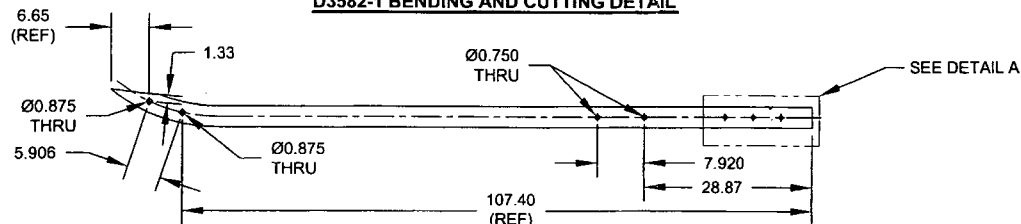
Qty	Part Number	Description
X	D3582-041	SKIDTUBE ASSEMBLY
1	D2962-150	EXTRUSION
1	D2964	CAP
1	D2965	CAP
1	D2971	CROSS BOLT SPACER
2	D2973	CROSS BOLT SPACER
2	D3492-049	PLUG ASSEMBLY
2	D3492-051	PLUG ASSEMBLY
6	D3492-053	PLUG ASSEMBLY
1	D3508-3	WEARPLATE
1	D3508-9	WEARPLATE
1	D3508-11	WEARPLATE
1	D3508-13	WEARPLATE
1	D3558-3	GASKET
1	D3558-9	GASKET
1	D3558-11	GASKET
1	D3558-13	GASKET
1	D3584-1	WEB
3	D3662-1	CROSS BOLT SPACER
1	D3662-3	CROSS BOLT SPACER
36	AELS-1032-130	INSERT
2	AL57-428-165	INSERT
28	AN3C4A	BOLT
2	AN3-5A	BOLT
2	AN4-4A	BOLT
28	AN960C10L	WASHER
2	AN960JD10L	WASHER
2	AN960JD416L	WASHER

## GENERAL NOTES:

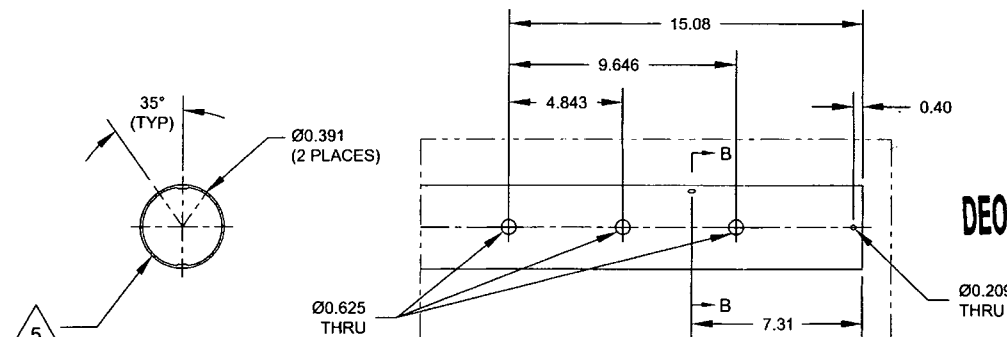
- ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- WELDING TO BE DONE PER DART QSI 004.
- INSERT D3584-1 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015 AFTER BENDING.
- USE DART DRILL TEMPLATE DT8900 TO LOCATE AND DRILL Ø0.297 HOLES (35 PLACES) FOR WEARSHOE INSERTS. INSTALL AELS-1032-130 PER SECTION G-G (36 PLACES) AFTER FINISH. SEAL WEARPLATE BOLTS WITH SIKAFLEX-241/291.
- DO NOT INSTALL AN3C4A BOLTS AND AN960C10L WASHERS IN INDICATED LOCATIONS.
- FINISH:
  - CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSERTING D3584-1 WEB.
  - POWDER COAT ASSEMBLY GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3.
  - ANTI-SKID PAINT AS INDICATED TO 1.00 ABOVE CENTER LINE PER DART QSI 005 4.4



D3582-1 BENDING AND CUTTING DETAIL



D3582-1 DRILLING DETAIL



SECTION B-B  
SCALE 1:5

DETAIL A  
SCALE 1:5

RELEASED  
07.11.2007

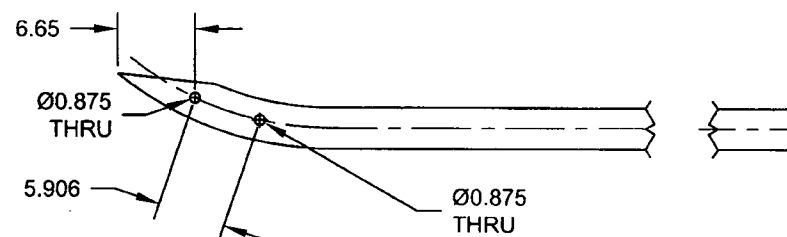
A	NEW ISSUE		PH	07.06.08
REV.		DESCRIPTION	BY	DATE
DESIGN	PH	<b>DART AEROSPACE USA, INC</b> PORT HADLOCK, WA  DRAWING NO. D3582  TITLE BK 117 SKIDTUBE ASSEMBLY		
DRAWN	PH			
CHECKED	PH			REV. A
MFG. APPR.	PH			SHEET 1 OF 2
APPROVED	PH			SCALE
DE APPR.	PH			1:20
DATE	07.06.08		COPYRIGHT © 2007 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC	



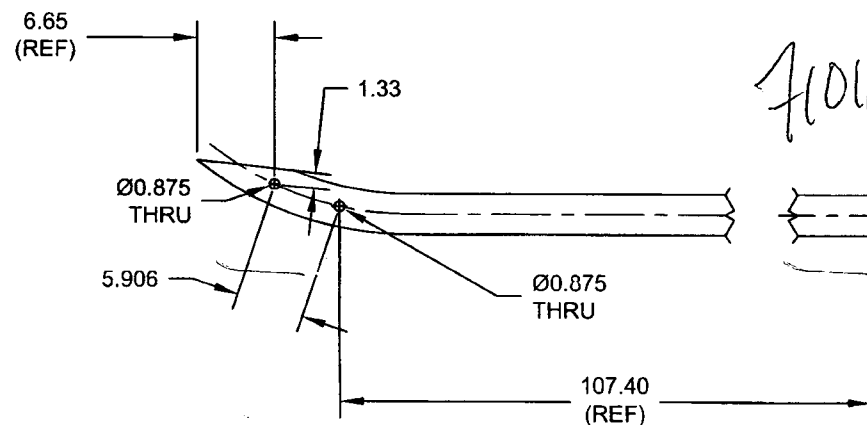
DRAWING NO. D3582	TITLE BK 117 SKIDTUBE ASSEMBLY	REV. A	DART AEROSPACE USA, INC ENGINEERING ORDER		D.E.O. NO. D3582-A-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>PH</i>	CHECKED <i>B</i>	MFG. APPR. <i>E</i>	APPROVED <i>MD</i>		DE APPR. <i>MA</i>		
DATE 09.04.06	DATE 04.04.06	DATE 09.04.06	DATE 12/24/06		DATE 09.04.06		

FOR EASE OF MANUFACTURE AND TO ENSURE THE FIT OF BRISTOL WIRESTRIKE SKID GEAR DEFLECTOR:  
UPDATE DIMENSIONING OF 2 FWD HOLES ON SHEET 1 AS SHOWN

**IS:**



**WAS:**



**RELEASED**  
09/04/22 *MD*



NO. 245

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliott  
Job number: 65186  
Part number: D117-762-041  
Description: 117 skid tube  
Welding Process: Tig[☒] Mig[ ]  
Base material: Aluminum  
Current: AC[☒] DC[ ]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[ ]  
Penetration: pass[☒] fail[ ]

UNACCEPTABLE

Cracks: pass[☒] fail[ ]  
Undercut: pass[☒] fail[ ]  
Pin holes: pass[☒] fail[ ]  
Overlap (cold lap): pass[☒] fail[ ]  
Porosity (surface): pass[☒] fail[ ]  
Coloration: pass[☒] fail[ ]

Qualifier Pat. Lunn Date of Test Coupon 11-01-31  
Welder Barclay Elliott Date of Test Coupon 11-01-31

The above named individual is qualified in accordance with AWS D17.1.2001 to weld